

ABSTRACT

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5 Lipo Chitooligosaccharide (LCO) [NodBj-V(C18:1, Mefuc)] isolated from *Bradyrhizobium japonicum* strain 532C was able to stimulate seed germination/seedling emergence, or in the case of potato, sprouting, of a number of crop plants representing eight distantly related plant families (Poaceae, Fabaceae, Brassicaceae, Cucurbitaceae, Malvaceae, Asteraceae, Chenopodiaceae and Solanaceae) of plants at 25 and/or at 15° C.

10 It also promoted sprouting potato minitubers. Other LCOs [NodRM-V(C_{16:2,5}) and LCO from *R. leguminosarum*] were also shown to also display growth-promoting effects on the tested crop plants. The compositions comprising at least one LCO are shown to be effective in promoting growth under both laboratory and field conditions. The invention thus also relates to methods for promoting seed germination and/or seedling emergence and/or growth of plants comprising subjecting the seeds and/or plants to an effective amount of an agricultural composition comprising at least one LCO.